

United States
Board on Geographical Names
Case Study (Domestic)

No. _____

Decision

Date

Case Name Sacramento Mountains

State New Mexico

County Otero

Lat. 33° 14' " N.
32° 33' " N.
32° 30' " N.

Long. 105° 57' W. " (northwestern end)
105° 45' W. (middle portion)
105° 15' W. (southeastern end)

Source: Major Structural Units of Southeastern New Mexico, by Ronald K. De Ford, Pl. 13
Bull. 18, New Mexico School of Mines. Alamo National Forest Top. map, U.S.G.S.

Sec. (northwestern end) T. 12 S. R. 11 E. M. New Mexico Principal Merid.
(middle portion) 19 S. 11 E. " " " "
(southeastern end) 20 S. 16 E. " " " "

Source: Map of New Mexico, General Land Office, Dept. of the Interior, 1936

Submitted by: Geologic Map of New Mexico, by H. H. Darton, U. S. G. S. 1927
Charles Westcott, Springfield, Mass. Date Submitted Sept. 10, 1943

Variants: Sacramento Mountains as a general term is applied to the Guadalupe Mountains,
Sacramento Mountains, Sierra Blanca, and Jicarilla Mountains.

Not:

Description: The Sacramento mountains are part of a major north-south series of ranges extending southward from central New Mexico into Texas along the line of the Sangre de Cristo Range. They rise to an elevation of over 9,000 feet as a steep escarpment overlooking the Tularosa Basin on the west. A monoclinical structure, the mountains slope gently to the Pecos River on the east. Rising 5,000 feet above the Tularosa Basin, the higher slopes are forested. The mountains are composed entirely of sedimentary rock including massive gray sandstone, and interbedded limestone, sandstone and gypsum of the Chupadera formation overlying red and sandstone. Below these are over 2,500 feet of limestone, sandstone, and shale.

The Guadalupe Mountains which extend south into Texas where they culminate in Guadalupe Point are similar in structure and topography, but they differ in stratigraphy. Moreover, they trend at right angles to the east-west southeastern end of the Sacramentos. To the north the Sierra Blanca, Carrizo Peak, Lone Mountain, and Jicarilla Mountains are Tertiary porphyritic intrusions. As a result, all of these have a more rounded and subdued relief than the angular, highly dissected features of the sedimentary ridges to the south.

Problem: Should the term Sacramento Mountains be used for only the monoclinical block in Otero County, or should it be used as a general term to include Guadalupe Mountains, Sierra Blanca, and Jicarilla Mountains?

Summary: Early maps, the General Land Office maps, and the literature published both by the states of Texas and New Mexico, and by the U. S. G. S. all apply the term Sacramento Mountains to the single monocline in Otero County. The state Geologic Map, 1928, (U.S.G.S.) and the Capitan, N. Mexico, Quadrangle use it as a general term.

Prepared by: Kenneth Bertrand Date Completed Sept. 27, 1943.

Sacramento Mountains, New Mexico

Evidence:

- | | | |
|---------------|---|--|
| 1859 | Sacramento Mountains
S. Pico | Surveyor General of New Mexico, Sketch of Public Survey of New Mexico. On this old map the Sacramento Mountains are shown, but the area now known as the Sierra Blanca Mountains is labeled, "S. Pico." The Jicarilla Mountains are not shown. |
| 1873-
1878 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains | Map by the U. S. Army Engineers surveyed in the years 1873, 1876, 1877, 1878 under the direction of First Lieutenant George M. Wheeler, Corps of Engineers, as part of the U. S. Geographical Surveys west of the 100th Meridian. This is sheet 84 of the Southwestern New Mexico Atlas. Jicarilla Mountains and Sierra Blanca shown fully. Sacramento Mountains only partially shown. Map does not include the Guadalupe Mountains. |
| 1892 | Guadalupe Mountains | Tarr, Ralph S., "Reconnaissance of the Guadalupe Mountains," <u>Texas Geological Survey, Bulletin 3</u> , Austin, 1892. Tarr describes the Guadalupe Mountains as beginning in New Mexico at a moderately low elevation becoming progressively higher to the south until they end in Guadalupe Point in Texas. Here the elevation is over 8,000 feet above sea level. (page 21) |
| 1894 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains | Map of the Territory of New Mexico, General Land Office, Department of the Interior. On this map the following mountains are named from north to south, and each is apparently considered a separate entity of equal rank: Jicarilla Mountains, Sierra Blanca, Sacramento Mountains, Guadalupe Mountains. |
| 1900 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains | Hill, Robert T., Topographic Atlas of the United States, U. S. G. S., Folio No. 3., "Physical Geography of the Texas Region." On Sheet XI the following are named in order from north to south: Jicarilla Mountains, Sierra Blanca, Sacramento Mountains, and the Guadalupe Mountains. |
| 1903 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains | Map of the Territory of New Mexico, General Land Office, Department of the Interior. On this map the nomenclature is the same as that on the 1894 map of the General Land Office. |

Sacramento Mountains, New Mexico

Evidence: (Continued)

- 1904 Guadalupe Mountains Richardson, George Burr, "Report of a Reconnaissance in Trans-Pecos Texas," Bulletin 9, University of Texas Mineral Survey, Austin, 1904. Richardson describes the Guadalupe Mountains as an eastward-sloping monocline with a steep scarp to the west. They begin in New Mexico and cross into Texas culminating in Guadalupe Point. At the state boundary the monoclinical ridge is ten miles wide. (page 21)
- 1905 Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains Lindgren, Waldemar and Graton, L. C., "A Reconnaissance of the Mineral Deposits of New Mexico," U. S. G. S. Bulletin 285, pp. 74-86, 1905. On page 75 he lists the mountains concerned in this case thus: "Farther south the province is represented by three chains of disconnected ranges which nevertheless conform in trend to more prominent ranges to the north. On the east are the Jicarilla Mountains, the Sierra Blanca, and the Sacramento and Guadalupe Mountains."
- 1907 Sacramento Mountains On February 6, 1907, the U. S. Board on Geographic Names decided that the Sacramento Mountains "included those groups known as Jicarilla, Sierra Blanca, Sacramento, and Guadalupe."
- 1909 Sacramento
Guadalupe Richardson, George Burr, Geologic Atlas of the United States, U. S. G. S. Folio No. 166, El Paso, Texas. On page one, Figure one is an index map of the area in which the locality represented by the folio is centered. On this map the mountains in question are labeled from north to south, Sacramento and Guadalupe, and the map does not extend far enough north to include the others.
- 1912 Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains Map of the State of New Mexico, General Land Office, Department of the Interior. The nomenclature on this map pertaining to the mountains in question is the same as in previous Land Office maps.
- 1914 Sacramento Mountains Alamo National Forest, New Mexico, (Exclusive of Guadalupe Mountains) U. S. G. S. topographic map. On this map only the Sacramento Mountains are labeled although the map extends into the area of the Sierra Blanca, and Sierra Blanca Peak is shown and labeled.

Sacramento Mountains, New Mexico

Evidence: (Continued)

1915 Jicarilla Mountains
Sierra Blanca
Sacramento Mountains

Meinzer, O. E. and Hare, F. F., "Geology and Water Resources of Tularosa Basin, New Mexico," U. S. G. S., Water Supply Paper, 343. Plate I shows from north to south the Jicarilla Mountains, the Sierra Blanca, Sacramento Mountains, but the Guadalupe are not shown on the map which does not extend far enough eastward to cover that area. Plate IV is a reproduction of a map of 1851 of the Tularosa Basin and Adjacent Country. From north to south the mountains are labeled, Sierra Carrizo, Sierra Capitan, Sierra Oscariba, Sierra Blanca, and Sierra Sacramento.

Plate V is a reproduction of a Map of the Tularosa Basin and Adjacent Country, 1859-67. From north to south the mountains shown are the Sierra Blanca and the Sacramento Mountains, but where the Guadalupe Mountains should be is the notation "High Hills." On page 26 the Sacramento Mountains are delimited and described. On page 27 the Sierra Blanca are delimited and described and differentiated from the Sacramento Mountains in terms of bedrock and topography. To quote: "The Sierra Blanca, like the Sacramento Mountains, is in a sense the western edge of a great plateau, and for that reason appears much more lofty from the west than from the east. It differs, however, from the Sacramento Mountains in its topographic detail, the Sacramento Mountains having the castellated appearance produced by weathering of nearly horizontal sedimentary beds of differing hardness, and the Sierra Blanca having the more massive appearance and less conventional pattern produced by the weathering and erosion of crystalline rocks." (page 27)

The Jicarillas are described as separate mountains on page 28.

1922 Sacramento Mountains
Guadalupe Mountains

Darton, N. H., "Geologic Structure of Parts of New Mexico," U. S. G. S., Bulletin 726, Part II, pp. 173-275. After a description of the Sacramento Mountains Darton says, "To the south the high cuesta continues into the Guadalupe Mountains, which extend to the southern margin of New Mexico and to El Capitan Peak, in Texas, where the altitude is 8,690 feet." (page 207)

Sacramento Mountains, New Mexico

Evidence: (Continued)

- | | | |
|------|---|---|
| 1925 | Sacramento Mountains | U. S. G. S. Topographic Map of New Mexico. On this map the name Sacramento Mountains is applied to all of the mountains in the case, and none of the sectional names are given. |
| 1927 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains | Map of New Mexico, General Land Office, Department of the Interior. On this map the nomenclature of the mountains in question is similar to previous Land Office maps. |
| 1928 | Sacramento Mountains | Darton, N. H., Geological Map of New Mexico, U. S. G. S. From north to south the mountains are listed as Jicarilla, Sierra Blanca, and Guadalupe. Sacramento Mountains appears as a general term covering all the others. Sierra Blanca, Jicarilla, and Capitan Mountains are shown as intrusive masses mainly of porphyry. |
| 1931 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains | Winchester, Dean E., Oil and Gas Map of New Mexico, New Mexico State Bureau of Mines and Mineral Resources. On this map the nomenclature is similar to that of the General Land Office map of 1927. |
| 1932 | Sacramento Mountains | U. S. Geographic Board, Sixth Report, page 655, " <u>Sacramento Mountains</u> : includes those groups known as Jicarilla, Sierra Blanca, Sacramento, and Guadalupe in Chaves, Eddy, Lincoln, and Otero Counties, New Mexico." |
| 1933 | Sacramento Mountains
Sierra Blanca | Lasky, Samuel G. and Wootton, Thomas P., "The Metal Resources of New Mexico and Their Economic Features," Bull. No. 7, New Mexico State School of Mines, State Bureau of Mines and Mineral Resources. Socorro, New Mexico. "The Sacramento Mountains occupy the northcentral part of the county and are continued northward by the Sierra Blanca. (page 84) |
| 1936 | Jicarilla Mountains
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains | Map of New Mexico, General Land Office, Department of the Interior. On this map the nomenclature is similar to that on previous Land Office maps. |
| 1937 | Sacramento Mountains | Capitan Quadrangle, New Mexico, U. S. G. S. |

Sacramento Mountains, New Mexico

Evidence: (Continued)

Topographic Map. On this quadrangle the Sierra Blanca, Vera Cruz Mountains, Carrizo Mountain, Patos Mountain, are listed as separate units the whole of which are referred to and labeled the Sacramento Mountains.

1941 Sacramento
Guadalupe

Lewis, F. E., "Position of San Andres group, West Texas and New Mexico," Bulletin of the American Association of Petroleum Geologists, Volume 25, No. 1, page 76. A rather complete map is here shown of the various ranges in the area. Only the Sacramento and Guadalupe are shown of the mountains concerned in this case.

1941 Sacramento Mountains

Lincoln National Forest, New Mexico, U. S. Forest Service. On this map Sacramento Mountains are labeled, but the Sierra Blanca are not named.

1942 Jicarilla Mountains
Lone Mountain
Patos Mountain
Carizo Peak
Sierra Blanca
Sacramento Mountains
Guadalupe Mountains

Bates, Robert L., "The Oil and Gas Resources of New Mexico," second edition, Bulletin 18, New Mexico School of Mines, State Bureau of Mines and Mineral Resources, Socorro, New Mexico. The Sacramento Mountains and the Guadalupe Mountains are described on pages 159, 162-163. "The area north of the Guadalupe Mountains and west of the Pecos River is called the Sacramento Cuesta. The precipitous west face of the Sacramento Mountains rises more than a mile above the Tularosa Valley." (page 163) Figure 10, page 160, is a reproduction of the map of F. E. Lewis in "Position of the San Andres Group, West Texas and New Mexico," Bull., Amer. Assoc. of Petrol. Geol., Vol. 25, No. 1, page 76.

Plate 13 in back pocket is by Ronald K. de Ford, and is entitled Major Structural Units of Southeastern New Mexico. On this map the following are clearly located and named in order from north to south: Jicarilla Mountains, Lone Mountain, Patos Mountain, Carizo Peak, Sierra Blanca, Sacramento Mountains, Guadalupe Mountains. The first five are shown as Tertiary igneous intrusions.

Sacramento Mountains, New Mexico

Evidence: (Continued)

1943	Jicarilla Mountains Sierra Blanca Sacramento Mountains Guadalupe Mountains	<u>Rand McNalley Commercial Atlas and Marketing Guide</u> , 74th edition, Map page 267 lists from north to south Jicarilla Mountains, Sierra Blanca, Sacramento Mountains, and Guadalupe Mountains. They all appear to be of equal rank.
------	---	--